CLAIMS

2   1.   A power management topology for a portable electronic device, comprising:

3   a portable electronic device comprising a rechargeable battery and a charge controller

4   comprising circuitry generating a feedback signal indicative of battery voltage and/or battery

5   charging current; and

6   an external AC/DC adapter generating a DC source signal from an AC source, said

7   adapter comprising a PWM generator generating a PWM signal and controller, said controller

8   receiving said feedback signal and adjusting the duty cycle of said PWM signal thereby adjusting

9   the voltage and/or current value of said DC source signal.

10   2.   A topology as claimed in claim 1, wherein said portable electronic device further

11   comprising a serial data interface and said feedback signal being generated as serial data, and

12   wherein said AC/DC adapter further comprising a serial communications interface for receiving

13   said serial data.

14   3.   A topology as claimed in claim 1, wherein said feedback signal is an analog signal.

15   4.   A topology as claimed in claim 1, wherein said portable electronic device further

16   comprising modulation circuitry to modulate said feedback signal on top of said DC source

17   signal, and said AC/DC adapter further comprising demodulation circuitry coupled to said DC

18   source signal to demodulate said feedback signal.

19   5.   A topology as claimed in claim 1, wherein charge controller further comprising circuitry

20   to generate a feedback signal indicative of power requirements of said portable electronic device

21   and battery charge current.

22   6.   An AC/DC adapter, comprising a PWM generator generating a PWM signal, a controller

23   receiving a feedback signal generated by an external portable electronic device, and a DC/DC

1   converter circuit generating a DC source signal, said controller adjusting the duty cycle of said

2   PWM signal based on said feedback signal thereby adjusting the voltage and/or current value of

3   said DC source signal.